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cancel

provided for allowing the selection of one of a plurality of reports for reporting purposes, submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices, and outputting a report based on the queries.

IN THE CLAIMS:

Please cancel claims 1-31, and add claims 32-49, as follows:

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32. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:

- a3*
- (a) collecting network communications usage information in real-time from a plurality of network devices;
 - (b) filtering and aggregating the network communications usage information;
 - (c) completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
 - (d) storing the plurality of data records in a database;
 - (e) allowing the selection of one of a plurality of reports for reporting purposes;
 - (f) submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and
 - (g) outputting a report based on the queries.

33. A method as recited in claim 32, and further comprising submitting network activity queries to the database utilizing the selected reports for retrieving information on activity of the network.

34. A method as recited in claim 33, and further comprising outputting a network activity report based on the network activity queries.

35. A method as recited in claim 32, and further comprising submitting resource consumption queries to the database utilizing the selected reports for retrieving information on resource consumption in the network.

36. A method as recited in claim 33, and further comprising outputting a resource consumption report based on the resource consumption queries.

37. A method as recited in claim 33, and further comprising generating an alert upon the occurrence of an event.

38. A method as recited in claim 37, wherein the alert is generated upon a value surpassing a predetermined amount.

39. A method as recited in claim 37, wherein the alert indicates that services should be ceased.

40. A method as recited in claim 37, wherein the alert indicates that services should be provided.

41. A method as recited in claim 32, wherein the report includes an auditing report.

42. A method as recited in claim 32, wherein the report includes a billing report.

43. A method as recited in claim 32, wherein the report includes an accounting report.

44. A computer program product for reporting on the collection of network usage information from a plurality of network devices, comprising:

- (a) computer code for collecting network communications usage information in real-time from a plurality of network devices;
- (b) computer code for filtering and aggregating the network communications usage information;

- (c) computer code for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
- (d) computer code for storing the plurality of data records in a database;
- (e) computer code for allowing the selection of one of a plurality of reports for reporting purposes;
- (f) computer code for submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and
- (g) computer code for outputting a report based on the queries.

45. A system for reporting on the collection of network usage information from a plurality of network devices, comprising:

- (a) information source modules for collecting network communications usage information in real-time from a plurality of network devices;
- (b) gatherers coupled to the information source modules, the gatherers adapted for filtering and aggregating the network communications usage information;
- (c) a central event manager coupled to the gatherers, the central event manager adapted for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
- (d) a database coupled to the central event manager, the database adapted for storing the plurality of data records; and
- (e) logic for allowing the selection of one of a plurality of reports for reporting purposes, submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices, and outputting a report based on the queries.

46. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:

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- (a) collecting network communications usage information in real-time from network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;
 - (b) translating the network communications usage information collected from the network devices utilizing the information source modules;
 - (c) caching the network communications usage information collected from the network devices utilizing the gatherers;
 - (d) normalizing the network communications usage information with the gatherers by excluding fields not required by a central event manager coupled to the gatherers;
 - (e) defining an enhancement procedure utilizing the central event manager;
 - (f) coordinating the collection of the network communications usage information by the gatherers utilizing the central event manager;
 - (g) filtering the network communications usage information utilizing the central event manager;
 - (h) completing a plurality of data records from the filtered network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
 - (i) aggregating the network communications usage information and the data records utilizing the central event manager for reducing a number of the data records;
 - (j) enhancing the aggregation of the network communications usage information with the gatherers in accordance with the defined enhancement procedure;
 - (k) time stamping the data records;
 - (l) storing the time stamped data records in tables in a central database coupled to the central event manager at a user-specified interval;
 - (m) deleting the stored data records upon the cessation of a predetermined amount of time after the storage utilizing the timestamp;